

U.S. Solar Mounts

USSM-AGM Strut Kit Supplemental Installation Manual

REV 2

Adjustable -Tilt, Multiple - Pole Racking Systems



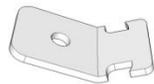
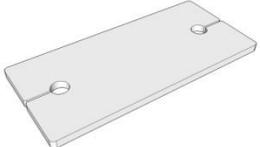
Ultra-Rugged Solar Mounting Solutions

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Important Note

This manual is only intended to aid in the installation of the optional USSM-AGM Cable Strut Kits. For all other information related to the installation of the AGM System, including safety information, pre-installation site setup, and full system installation instructions, please refer to the included USSM-AGM Instruction Manual.

CABLE STRUT KIT COMPONENTS

Solid Strut	Quantity and length varies with system size/design.	
Strut Clip	Three (3) per rail	
Strut Splice	Quantity varies with system size/design.	
Fastening Equipment Includes 1/4" and 5/16" Stainless Hardware.	Quantities vary with system design.	

Important Note

Installation of the Cable Strut Kits should not begin until after the panels have been mounted on the rails, and the system has been checked to ensure all bolts have been tightened into place and all parts are secure. The Strut Kits will be easiest to install with the array left in the flat position.

*Some images may be shown without panels for better reference.

STRUT KIT INSTALL

Each array will have 3 rows of Cable Strut runs, corresponding with the 3 rows of panels. For the center rows, the Strut should be cut about an inch short of hitting the cradles on each end, and fits directly in line with the Pivot Pin. The outer rows will be tied together into a continuous run using the Strut Splices. Be sure to debur all cut Strut ends.

To begin installing the center row, 5/16 Carriage Bolts will need to be slid down the bottom side-slot of each rail on one side, as indicated below in Figure 1. Each rail only needs a single bolt per Strut, with the bolts alternating facing in and out (Fig. 2).

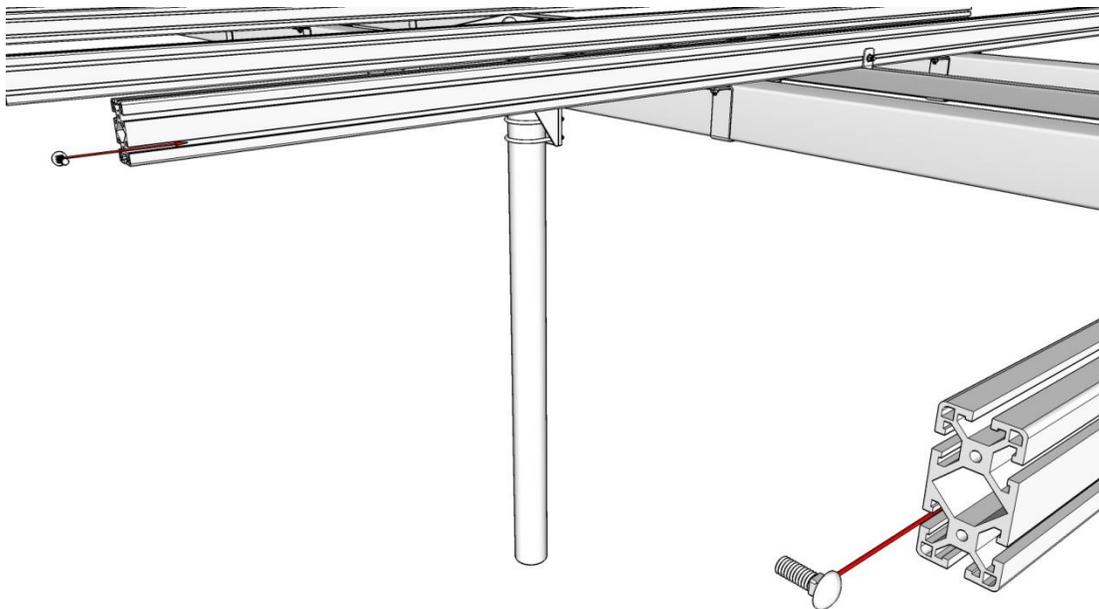


Fig. 1

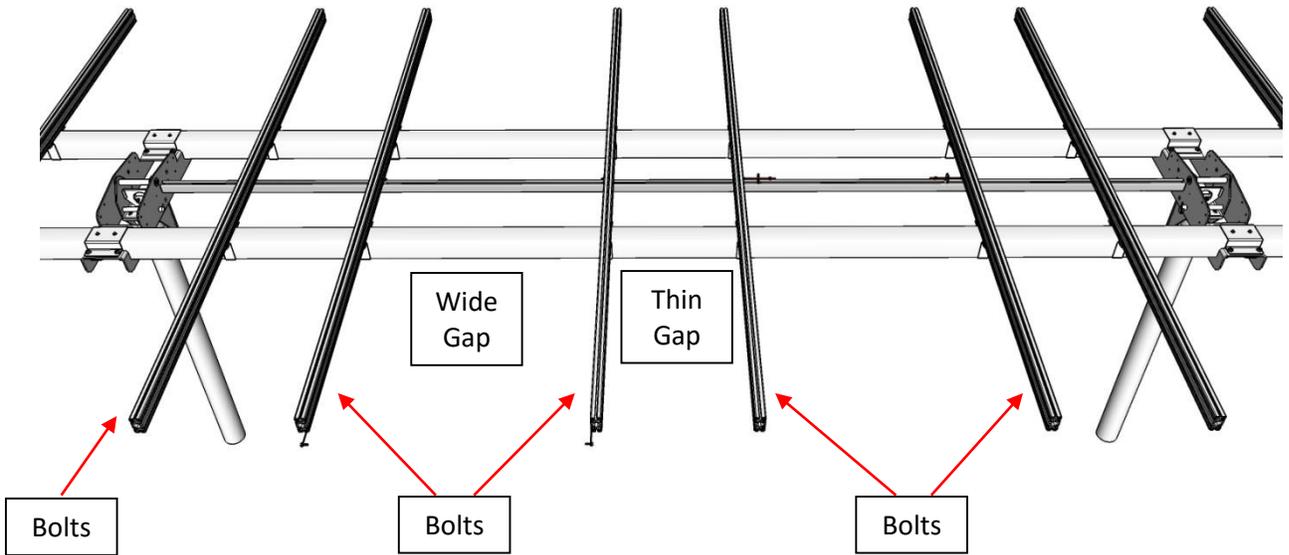


Fig. 2

With the bolts slid into place, the Strut can now be installed using the Strut Clips and the 5/16 serrated flange nuts (Fig. 3). It is best to install the 2 center Clips first, to aid in holding the Strut in place while the remaining Clips are installed. The Clips are intentionally designed to bind against the Rails and Strut, ensuring a secure finish position, so try and make any positioning adjustments before all the Clips are installed.

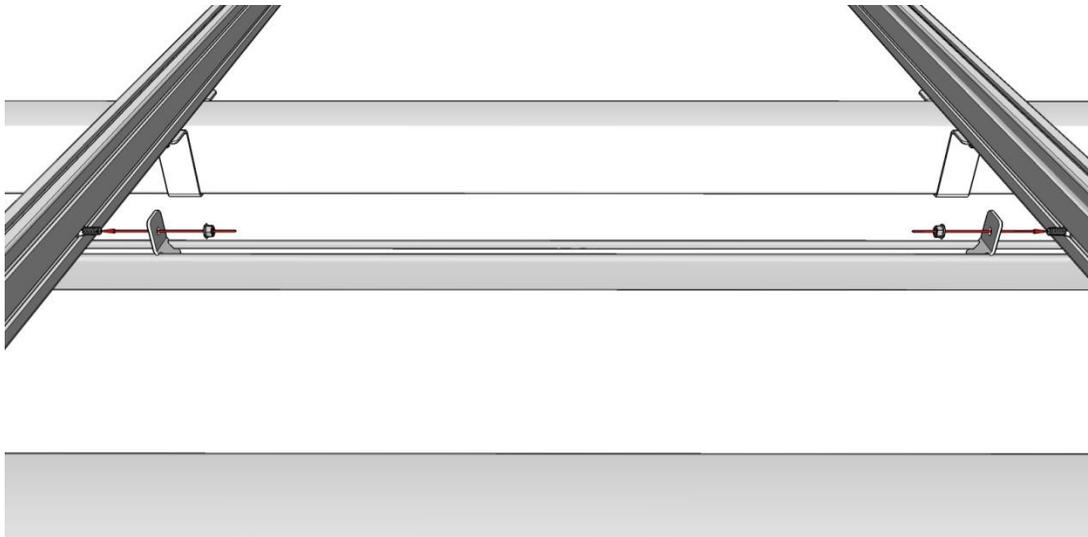


Fig. 3

Once the center row is installed, the outside rows can be placed using most of the same process. If the system does not include the optional Wind Brace package, the positioning of the outside Strut rows should be roughly in line with the center of the panel row, putting them directly below the output wires. The Wind Brace package may require the Strut to be adjusted in or out.

It is best to start the outside rows on one end of the array, working your way across one row at a time. It is also advised to put only a couple Clips on at this time, leaving them loose to allow for adjustment once all the Strut in the row has been installed. A chalk line can also be used to guide the Strut from one end to the other, to ensure a straight finished cable tray.

Once the first piece of outside Strut is in place, the second piece will need to be tied into it using a Strut Splice, a couple Channel Nuts, and some 5/16 hex bolts (Fig. 4). The second Strut can then be clipped into place, and the row can be finished using the same method of tying each piece in.

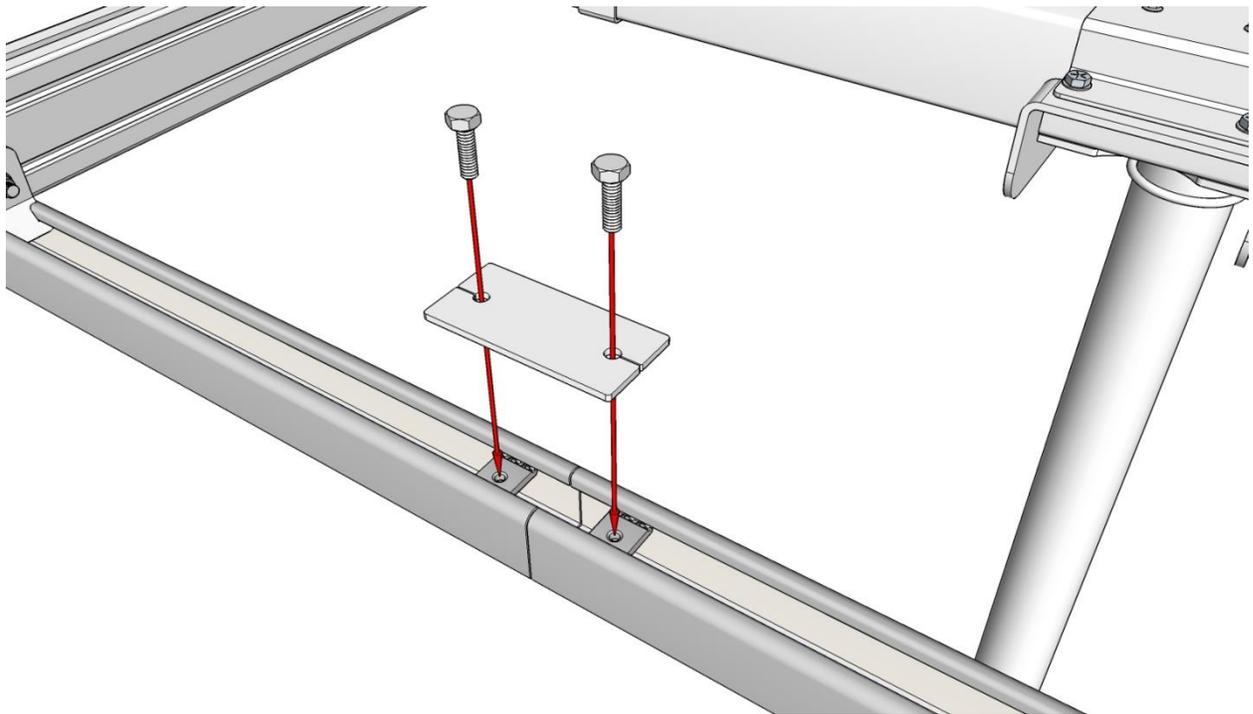


Fig. 4

Once all the rows are completed, make sure to go back through and tighten the nuts and ensure the rows are all properly aligned. The cables from the panels can now be safely tucked into the Strut rows.

*For sections of cable going over the Cradles between center Strut pieces, concealing the cables in flexible conduit for protection may be a good idea.

ADDITIONAL OPTIONAL ITEMS

US Solar Mounts offers another set of optional items to go along with their Strut Kits. Figure 5 below shows the Conduit Adapter Plates, which mount onto the Strut Kit just like a normal Splice Plate, but with a threaded hole in the middle for screwing in a flexible conduit elbow for further concealing wires between the rows of strut. These are available in packs of 3 upon request.

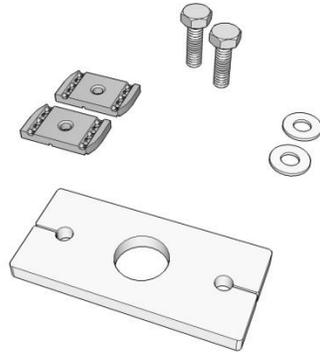


Fig. 5